REMARKS

Applicants have amended claim 1 to stress the following feature of Applicants' disks which is strikingly different from the cited prior art.

Consider the cross-sectional views of Applicants' disks for both the ROM portion (Figure 4) and the writable portion (Figure 3). Note that the features stamped in substrate are merely coated and are not filled in despite the covering by the phase-change layer and the dielectric layer. Indeed, Applicants presents the typical bump length for the ROM portion for both the coated (the formed disk) and uncoated (naked stamped substrate) states in Table 1 on page 21. This is a fundamental feature of Applicants' "first-surface" disk in which no defocusing layer covers the features (and necessarily fills in the features such that no bumps/lands remain defined by the defocusing layer).

Claim 1 reflects this feature by reciting that "a combined thickness of the phase change material and the dielectric layer is such that the dielectric layer defines coated bumps and planar regions in the first portion and coated lands and grooves in the second portion."

In sharp contrast, consider the cross-sectional view of Obata's disk in his Figures 4D and 4E. As would be the case for any conventional "second surface" disk, the grooves between lands (as seen in the stamped substrate in Figure 4B) are filled with what Obata calls a "protective film." Obata does not describe this film in detail, but conventionally it is just polycarbonate that is spin formed onto the disk. All "second surface" optical disks have such a "feature filling" layer, it acts to defocus dust and other imperfections.

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Applicant's disk is starkly different -- as can be seen in the cross-section views of Figure 3 (the RAM portion) and Figure 4 (the ROM portion), the features are not "filled

in" as in the Obata second surface disk. Instead, as seen in Figure 3, the lands of the writeable (RAM) portion of Applicant's disk are not filled in after being coated with the phase change layer and the dielectric layer. Indeed, as noted in page 17, lines 4 – 9, the lands (in one embodiment) may still have a height of 85 nm after final disk manufacture such that the lands are coated with the phase change layer and the dielectric layer. Similarly, as seen Figure 4, the bumps in the ROM (read only) portion of Applicant's disk are still present after being coated with the phase-change layer and the dielectric layer.

The Kawanishi reference (USP 5,591,500) adds nothing further to Obata: Kawanishi is plainly directed to a "second surface" disk in which the features are filled in by a thick defocusing layer as seen in Figure 1 in which both the top and bottom surfaces of Kawanishi's disk are flat, without any defined features whatsoever. Similarly, the Ooki reference (USP 5,602,824) merely discloses a conventional land height (100 nm) but is entirely silent whether such a feature remains defined when covered by its thick defocusing layer that in conventional in second-surface disk. Finally, the Morita reference (USP 5,991,258) is directed to a magneto-optic disk and thus provides no suggestion for the provision of a stamped substrate being covered with a phase-change layer and dielectric layer as set forth in claim 1.

The Spiral Track limitation is in combination and not being claimed alone

Applicants note that their arguments regarding the spiral track of bumps limitation was dismissed with the comment that "Applicants acknowledge the newly inserted spiral track of bumps as being part of the prior art and hence no further discussion is made thereto." Applicants respectfully submit that under such reasoning, nothing would be patentable since virtually all inventions rely on old elements being set forth in novel and

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non-obvious ways. Of course, it is true that disks having spiral bumps are in the prior art. But what is plainly not in the prior art is a substrate stamped with both a spiral track of bumps (forming a ROM portion) and also lands (forming a writeable portion) that is covered with a phase-change layer and a dielectric layer (and no further layers) such that the ROM and RAM features remain defined by the dielectric layer. This combination cannot be dismissed with the mere comment that spiral tracks of bumps are in the prior art. Despite this being plainly claimed and argued, the Obata reference is still trotted out as supposedly disclosing the bumps through its "embossed area 114a." At great cost to the Applicants in attorney time, Applicants noted in their last response that Obata does not disclose a spiral track of bumps as the ROM portion. Instead, Obata is plainly teaching a bar code label as stated in Col. 8, lines 5-16:

> The disk cartridge identification information is recorded by forming a plurality of rectangular patterns each having its length in a radial direction of the optical disk and its width in perimeter directions thereof, and spaced apart from each other in the perimeter directions. More specifically, the disk cartridge identification information is expressed by a combination of compression and rarefaction of a gap between the plurality of rectangular patterns in the perimeter directions, or by a combination of different sizes of the plurality of rectangular patterns in the directions of its width. The above-mentioned rectangular pattern can be formed, for example, by the following process.

However, these arguments were never addressed and Obata once again cited for its bar code. To assist an appreciation of the novelty set forth in claim 1, consider how ROM disks (having spiral tracks of bumps) such as DVDs and audio CDs are formed: the stamped substrate is coated with a reflective layer such as aluminum. In sharp contrast, a writeable portion requires an absorptive (rather than a reflective) layer. However, Applicants were able to overcome these competing requirements (ROM needing a reflective property whereas RAM needs an absorptive property) with a phase-

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change layer having appropriate levels of reflectivity and absorptivity. Nothing like it exists in the prior art -- despite the long and drawn out nature of the prosecution in this case, no relevant prior art has been found whatsoever with regard to this inventive combination.

The additional cited prior art adds nothing further. For example, Ohkawa disk is plainly showing a "feature filled" second surface disk in the cross-section of Figure 1. The same is true for the Pan and Nakamura references. Thus, claim 1 and its dependent claims are patentable over the cited prior art.

CONCLUSION

For the foregoing reasons, Applicant believes pending Claims 1, 4, 7, 10, 11, 12, and 15 are allowable, and a notice of allowance is respectfully requested. If the Examiner has any questions regarding the application, the Examiner is invited to call the undersigned Attorney at (949) 752-7040.

Certification of Facsimile Transmission
I hereby certify that this paper is being facsimile transmitted to the U.S. Patent and Trademark Office at 571 273 8300 on the date shown below.

Jonathan Hallman — September 5, 2006 (Date of Signature)

Respectfully submitted,

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